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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/868,184	06/15/2001	Mika Nakamura	OGO: 082	6958

7590 10/06/2003
Parkhurst & Wendel
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EXAMINER

CHANG, KENT WU

ART UNIT	PAPER NUMBER
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2673

DATE MAILED: 10/06/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/868,184

Applicant(s)

NAKAMURA ET AL.

Examiner

Kent Chang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-57 is/are pending in the application.
- 4a) Of the above claim(s) 5-7 and 10-12 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3, 4, 8, 9 and 13-42 is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 43-57 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 11/26/01 is in compliance with the provisions of 37 CFR 1.97 and all of the references listed in the IDS have been considered by the examiner.

Claim Objections

2. Claims 5-7, 10-12 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent should refer to other claims in the alternative only. See MPEP § 608.01(n). Accordingly, the claims 5-7, 10-12 are not been further treated on the merits.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-2 and 43-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okada et al (US Patent No. 6,221,444) in view of Takenaka et al (US Patent No. 6,473,077).

Okada teaches an LCD device having a first substrate on which TFT and pixel electrodes are formed and second substrate on which opposing electrode is formed, and means for applying driving signal to cause transition of a splay

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configuration of the LC layer to a bend configuration. Okada is silent in using two different driving signals.

However, Takenaka teaches to use an image display signal (17) and an black signal (16) to drive an LCD (see column 6 lines 22-60 and Fig.10A) so as to prevent the display image from becoming unclear due to an overlap of the afterimage of the display image of the preceding frame period with the display image of the current frame period (see column 2 line 66 to column 3 line 2). The image display signal is in a lower level than the black signal.

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to use an image display signal and an black signal to drive an LCD as taught by Takenaka in the device of Okada so as to prevent the display image from becoming unclear due to an overlap of the afterimage of the display image of the preceding frame period with the display image of the current frame period as suggested by Takenaka.

Allowable Subject Matter

5. Claims 3, 4, 8, 9, 13-18, 19-42 are allowed.
6. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record fails to teach to drive an LCD by alternately applying a primary voltage signal and a secondary voltage signal to the pixels, and repeating the applying step, wherein the time period for applying the primary voltage signal is 50% to 95% of the length of the repeat period as recited in the claims.

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CONTACT INFORMATION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kent Chang whose telephone number is 703-305-4824. The examiner can normally be reached on Monday to Thursday from 9:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala, can be reached at 703-305-4938.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121

Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600

Customer Service Office whose telephone number is 305-9700.



Kent Chang
Primary Examiner
Art Unit 2673

Kc

9/24/03